PERTUSSIS

Pertussis (whooping cough) is a highly contagious disease of the respiratory tract caused by the bacterium *Bordetella pertussis.* The disease can progress to severe paroxysms of cough, often with a characteristic inspiratory whoop. Pertussis is primarily a very contagious childhood disease that can be particularly severe in infants less than one year of age. Transmission occurs by direct contact with aerosol droplets from the respiratory tract of infected persons. Immunization beginning at two months of age is recommended and completion of the four injection series is required for protective immunity.

Laboratory Criteria for Diagnosis:

- Isolation of *Bordetella pertussis* from clinical specimen, **OR**
- Positive polymerase chain reaction (PCR) for *B. pertussis*.

Case Classification

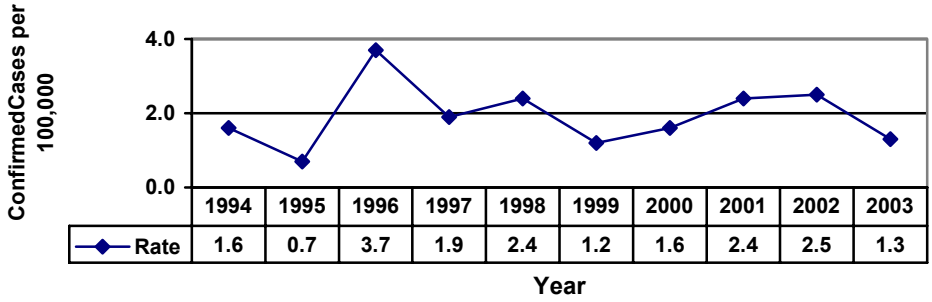
Confirmed: A case that is culture positive and in which an acute cough illness of any duration is present; or a case that meets the clinical case definition and is confirmed by positive PCR; or a case that meets the clinical case definition and is epidemiologically linked directly to a case confirmed by either culture or PCR.

Probable: A case that meets the clinical case definition, is not laboratory confirmed, and is not epidemiologically linked to a laboratory-confirmed case.

Comment

The clinical case definition is appropriate for endemic or sporadic cases. In outbreak settings, a case may be defined as a cough illness lasting ≥2 weeks. Because some studies have documented that direct fluorescent antibody testing of naso-pharyngeal secretions has low sensitivity and variable specificity, it should not be relied on as a criterion for laboratory confirmation. Serologic testing for pertussis is available in some areas but is not standardized and, therefore, should not be relied on as a criterion for laboratory confirmation for national reporting purposes. Both probable and confirmed cases should be reported to the National Notifiable Disease Surveillance System.

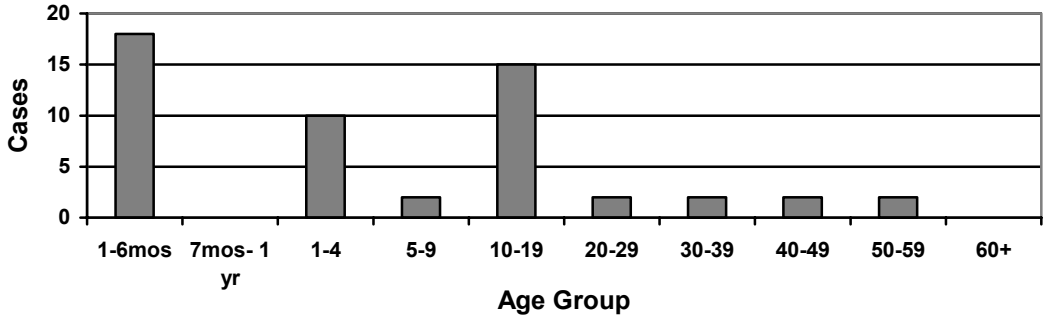
Pertussis Incidence
Kentucky, 1994-2003



Epidemiology

Kentucky	2003	Rate per 100,000	U.S. Rate (2002) per 100,000
Cases	53	1.3	3.47
Cases by Gender			
Female	31	1.5	
Male	22	1.1	

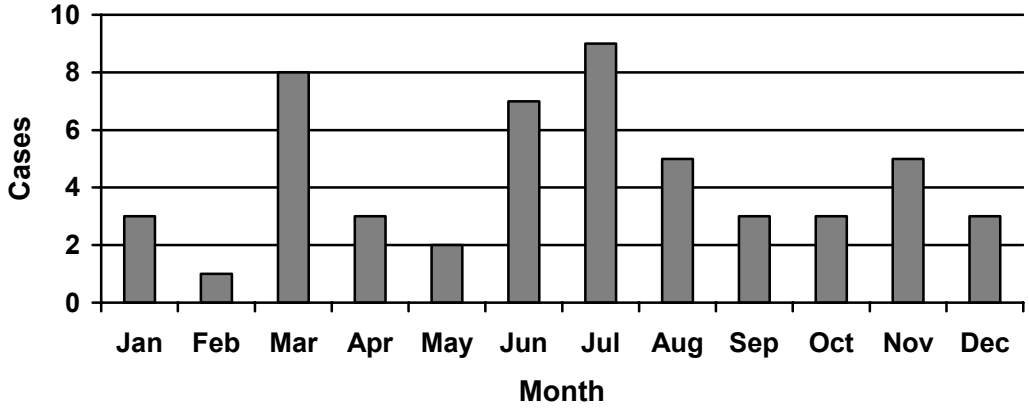
Pertussis, Cases by Age Group
Kentucky 2003



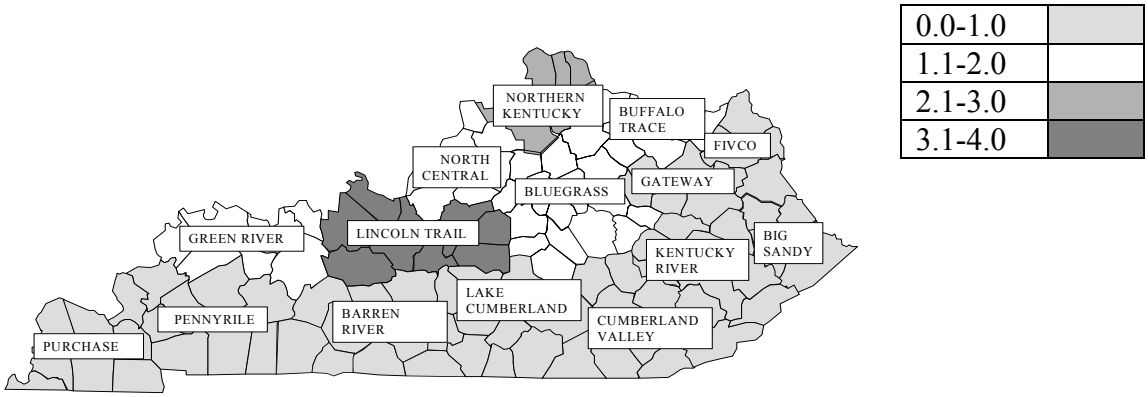
This chart shows actual case numbers in each age group. Children in the less than 6 months of age group had the highest rate at 18 cases per 100,000, followed by the 10-19 year age group at 15 cases per 100,000. There were no reported cases of Pertussis in the 7 months to 1 year age group or the 60+ age group.

Pertussis, Reported Cases by Month of Onset

Kentucky, 2003



Pertussis by District, Kentucky
Annual Incidence 2003
Per 100,000



Districts Reporting Cases	**2003**	
Rate per 100,000	Cases	Rate
Green River District	3	1.4
Barren River District	1	0.4
Lincoln Trail District	8	3.2
North Central District	17	1.9
Northern Kentucky District	12	3.0
Buffalo Trace Distrct	1	1.8
Bluegrass District	3	1.6

The Lincoln Trail District reported the highest rate of 3.2 cases per 100,000, followed by the Northern Kentucky District with 3.0 cases per 100,000. Nineteen counties reported at least one case of pertussis with 75 % of all cases reported by the North Central, Bluegrass, and Northern Kentucky Districts. One death was attributed to pertussis infection.